

**WHAT IS CLAIMED IS:**

1           1. A radio communication system for communication between  
2           a first mobile system and a second mobile system, each of the  
3           first and the second mobile systems having a transceiver for  
4           receiving and emitting radio signal, the second mobile system  
5           comprising:  
6           a received signal strength detecting device for detecting a  
7           received signal strength of the transceiver in the second  
8           mobile system;  
9           a power controller for outputting a transmitted power strength  
10          status and controlling transmitted power of the  
11          transceiver in the second mobile system according to the  
12          received signal strength; and  
13          an indicating device for receiving the transmitted power  
14          strength status and indicating a transmitted RF power  
15          strength status of the transceiver in the second mobile  
16          system.

1           2. The radio communication system as claimed in claim 1,  
2           wherein the power controller comprises a transmitted power  
3           calibration device for calibrating the transmitted power of the  
4           transceiver.

1           3. The radio communication system as claimed in claim 1,  
2           wherein each transceiver has a transmitter and a receiver, the  
3           received signal strength is represented as voltage, the power  
4           controller comprises a V-I converter to correspondingly  
5           converting the received signal strength into supply current to  
6           power the transmitter of the second mobile.

1           4. The radio communication system as claimed in claim 3,  
2           wherein the power controller comprises a transmitted power  
3           calibration device connected in series with the V-I converter  
4           to calibrate the supply current for powering the transmitter  
5           of the second mobile.

1           5. The radio communication system as claimed in claim 3,  
2           wherein the V-I converter is a transistor array comprising  
3           P-type MOS transistors, gates of P-type MOS transistors are  
4           controlled by the received signal strength.

1           6. The radio communication system as claimed in claim 5,  
2           wherein the power controller further comprises a transmitted  
3           power calibration device with switches, and each switch is  
4           connected in series with a corresponding P-type MOS transistor  
5           in the V-I converter to decide whether current is allowed to  
6           flow through the corresponding P-type MOS transistor and to  
7           power the power the transmitter of the second mobile.

1           7. The radio communication system as claimed in claim 3,  
2           wherein the power controller further has a current measurer to  
3           measuring the supply current and to correspondingly generate  
4           the transmitted power strength status.

1           8. The radio communication system as claimed in claim 7,  
2           wherein the current measurer is an analog to digital converter.

1           9. A method for indicating a transmitted signal power level  
2           of a PCD, the method comprising the following steps:  
3           detecting a received signal strength of a received signal

4 of the PCD;

5 converting the received signal strength into supply  
6 current signal to power a transmitter of the PCD;

7 determining a transmitted power strength of the  
8 transmitter; and

9 indicating the transmitted power strength via an  
10 indicating device in the PCD, whereby an user of the PCD is  
11 alerted to RF radiation of the PCD.

1 10. The method as claimed in claim 9, further comprising  
2 a step of:  
3 calibrating the supply current to modify the transmitted power  
4 of the transmitter.

1 11. The method as claimed in claim 10, wherein the supply  
2 current is determined by plurality of switches, selectively  
3 turned-on or turned-off for the step of calibrating.

1 12. The method as claimed in claim 9, wherein the received  
2 signal strength is represented as voltage and the step of  
3 converting the received signal strength into the supply current  
4 signal is performing a V-I conversion.

1 13. The method as claimed in claim 9, wherein the step of  
2 determining the transmitted power strength of the transmitter  
3 is performed by detecting the supply current.